

CLAIMS:

1. Method for determining the dosage of follicle-stimulating hormone (FSH) in the treatment of infertility of women comprising the determination of the FSH receptor variant of the woman to be treated.
2. The method of claim 1, wherein the determination of the FSH receptor variant comprises the steps:
 - 10 (a) isolating genomic DNA from a blood sample of the woman to be treated, and
 - (b) determining whether the isolated DNA codes for the FSH-receptor variant Ala 307/Ser 680 or Thr 307/Asn 680.
3. The method of claim 2, wherein the determination of the FSH-receptor variant of step (b) is performed by
 - (b1) partial amplification of the FSH receptor DNA by use of a pair of primers flanking the variant region(s) of the FSH receptor DNA coding for the amino acids 307 and/or 680 of the FSH receptor protein,
 - (b2) digesting the amplified DNA with a restriction enzyme digesting only the DNA of one of the FSH receptor variants,
 - (b3) determining the FSH-receptor variant by restriction fragment length-polymerase chain reaction.
4. The method of claim 3, wherein the length of the primers is 12 to 30 nucleotides, preferably 17 to 25 nucleotides, and the distance to the nucleotides coding for the amino acid in positions 307 or 680 are 20 to 1500 bp, preferably 100 to 1000 bp.
5. The method of claim 3 or 4, wherein the primers are flanking the DNA sequence of the amino acid in position 680 of the FSH receptor protein and the restriction enzyme is Bsr I.

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claim 3

6. The method of ~~claims 3 to 5~~, wherein the pair of primers comprises an upstream primer selected from

A₁; 5'-GCTATACTGGATCTGAGATG
B₁; 5'-TTGACATGACGTACACTGAG
C₁; 5'-CTGATCTCTGCATTGGAATC
D₁; 5'-AGCTGGACTGCAAGGTGCAG
E₁; 5'-CCTTGTGCTCAATGTCCCTGG
F₁; 5'-CCATTCTGCCTCCCTCAAG
G₁; 5'-GAGCAAGTGTGGCTGCTATG,

- and a reverse primer selected from

A₂; 5'-ACCACTTCATTGCATAAGTC
B₂; 5'-CAACTGATGCAATGAGCAGC
C₂; 5'-ATCCAGCCCCATCACCATGAC
D₂; 5'-GGTTCCGCACTGTGAGGTAG
E₂; 5'-GCTTTGGACACAGTGATGAG
F₂; 5'-TGGATGGGTGTTGTGGACAG
G₂; 5'-TGTAGAAGCACTGTCAGCTC,

preferably the pair of primers is E₁ and G₂ as defined above.

7. A method for treating infertility in women which comprises determining the FSH receptor variant in the woman to be treated as defined in ~~claims 1 to 6~~.

8. The method of claim 7, further comprising administering the woman a suitable amount of FSH.

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9. A kit for performing the determination of the FSH receptor variant in a woman as defined in ~~claims 1 to 8~~.

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10. The kit of claim 9 comprising a pair of primers as defined in ~~claims 3-6~~, Taq polymerase and a restriction enzyme.

claim 3

11. A FSH preparation comprising a specific amount of FSH which is suitable as a daily dosage for high dosage, intermediate dosage or low dosage FSH treatment.